16 MPYC-204(MATHEMATICAL METHOD IN PHYSICS -II)

Marks-100

Unit-I: Tensor analysis and differential geometry:

Cartesian tensor in three space,Curves in three space and Frenet Formula, General Tensor analysis,Covarient derivative and Christofoel symbol.(10)

Unit-II: Special functions:

Solution of Bessel, Laguerre, hypergeometric and con uent Hyper geometric Equation by generating function method and their properties.(15)

Unit-III:

Functions of complex variable, Ordinary differential equations , differential operations and Sturm Liouville theory, Partial differential equations, Greens function, Solution of inhomogeneous partial differential equation by Green function method.(15)

BOOKS:

1.Mathematical methods of physics J. Mathews & R.L. Walker. 2. Mathematical methods of physics Arfken and Weber.

3.Mathematical methods for physicists Dennery&Krzywicki.

4.Mathematical methods of physics H. K. Das

5.Mathematical methods of physics Dr. Rama verma (S. Chand) 6.Mathematical methods of physics Satyaprakash (S. Chand)

7.Mathematical methods of physics Binoy Bhattacharya. (NCBA Publication) 8.Introduction to Tensor calculus - Goreux S. J.

9.Mathematical methods of physics Dettman J.W.